

The opinion in support of the decision being entered today was **not** written for publication and is **not** binding precedent of the Board.

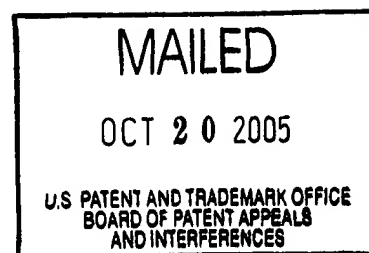
UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte TADAO NAKAZAWA,
HIROSHI ONAKA and MINORU SEINO

Appeal No. 2005-2114
Application No. 09/248,103

ON BRIEF



Before RUGGIERO, DIXON, and MACDONALD, **Administrative Patent Judges.**
MACDONALD, **Administrative Patent Judge.**

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-89.

Invention

Appellants' invention relates to an apparatus which includes a plurality of acousto-optical tunable filters (AOTF) cascaded together. Each AOTF generates a surface acoustic wave in an optical waveguide in accordance with RF signals applied to the AOTF. A phase of a beat generated by the RF signals applied to one

of the plurality of AOTFs is different from a phase of a beat generated by the RF signals applied to a different AOTF of the plurality of AOTFs. Appellants' specification at page 5, lines 14-23.

Claim 1 is representative of the claimed invention and is reproduced as follows:

1. An apparatus comprising:
first and second optical filters cascaded together so that the second optical filter filters light output from the first optical filter, the first and second optical filters having filtering characteristics controlled in accordance RF signals applied thereto, wherein a phase of a beat generated by the RF signals applied to the first optical filter is different than a phase of a beat generated by the RF signals applied to the second optical filter.

References

The references relied on by the Examiner are as follows:

Cheung	4,906,064	March 6, 1990
Thompson et al. (Thompson)	6,031,852	February 29, 2000 (Filed May 29, 1998)

Gaudino, R and Blumenthal, D. J. (Gaudino); "A Novel AOTF-Based Multichannel Add-Drop Node and its Cascadability in WDM Ring Networks"; ECOC '97 Conf Pub No. 448; September 22-25, 1997; pp. 77-80.

Rejections At Issue

Claims 1-15, 18-22, 25-32, 35-59, 62-68, and 71-89 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Gaudino and Thompson.

Claims 16-17, 23-24, 33-34, 60-61, and 69-70 stand rejected under 35 U.S.C. § 103 as being obvious over the combination of Gaudino, Thompson, and Cheung.

Throughout our opinion, we make references to the Appellants' briefs, and to the Examiner's Answer for the respective details thereof.¹

OPINION

With full consideration being given to the subject matter on appeal, the Examiner's rejections and the arguments of the Appellants and the Examiner, for the reasons stated *infra*, we reverse the Examiner's rejection of claims 1-89 under 35 U.S.C. § 103.

Only those arguments actually made by Appellants have been considered in this decision. Arguments that Appellants could have made but chose not to make in the briefs have not been considered. We deem such arguments to be waived by Appellants [see 37 CFR § 41.37(c)(1)(vii) effective September 13, 2004 replacing 37 CFR § 1.192(a)].

¹Appellants filed an appeal brief on October 7, 2003. Appellants filed a reply brief on March 31, 2004. The Examiner mailed an Examiner's Answer on December 30, 2003.

I. Whether the Rejection of Claims 1-15, 18-22, 25-32, 35-59, 62-68, and 71-89 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 1-15, 18-22, 25-32, 35-59, 62-68, and 71-89. Accordingly, we reverse. For purposes of this discussion we will treat claim 1 as a representative claim of claims 1-15, 18-22, 25-32, 35-59, 62-68, and 71-89.

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of establishing a **prima facie** case of obviousness. **In re Oetiker**, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). **See also In re Piasecki**, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984). The Examiner can satisfy this burden by showing that some objective teaching in the prior art or knowledge generally available to one of ordinary skill in the art suggests the claimed subject matter. **In re Fine**, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Only if this initial burden is met does the burden of coming forward with evidence or argument shift to the Appellants. **Oetiker**, 977 F.2d at 1445, 24 USPQ2d at 1444. **See also Piasecki**, 745 F.2d at 1472, 223 USPQ at 788.

An obviousness analysis commences with a review and consideration of all the pertinent evidence and arguments. "In reviewing the [E]xaminer's decision on appeal, the Board must necessarily weigh all of the evidence and argument." *Oetiker*, 977 F.2d at 1445, 24 USPQ2d at 1444. "[T]he Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion." *In re Lee*, 277 F.3d 1338, 1344, 61 USPQ2d 1430, 1434 (Fed. Cir. 2002).

With respect to independent claim 1, Appellants argue at page 6 of the brief, "Gaudino and Thompson are non-analogous art." We find this argument unpersuasive on its face. Even the most cursory review of these reference shows that they are analogous art in that they are both directed to acousto-optic signal processing.

Appellants also argue at page 7 of the brief "the cited portion of Thompson should not be combined with Gaudino in the manner suggested by the Examiner." We find this argument persuasive. The Examiner cites column 6, lines 2-13, of Thompson as teaching AOTFs with different phases in order to provide "higher efficiency over a wide range of acoustic frequencies and deflection angles." Firstly, the cited section of Thompson teaches AODs (acousto-optic deflectors) rather than AOTFs (acousto-optic tunable filters), and the Examiner has not established that these two

devices are interchangeable. Secondly, the Examiner fails to account for the fact that the ultimate function of the AOD is to "give the appropriate angle" (Thompson at col. 6, lines 12-13) and not tuner adjustment. We see no discussion in the rejection of how higher efficiency in generating appropriate deflection angles is applicable to the claimed AOTFs.

We find the Examiner has not met the initial burden of establishing a **prima facie** case of obviousness. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103.

II. Whether the Rejection of Claims 16-17, 23-24, 33-34, 60-61, and 69-70 Under 35 U.S.C. § 103 is proper?

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the invention as set forth in claims 16-17, 23-24, 33-34, 60-61, and 69-70. Accordingly, we reverse.

With respect to dependent claims 16-17, 23-24, 33-34, 60-61, and 69-70, we note that the Examiner has relied on the Cheung reference solely to teach, "the cascaded AOTFs are formed on the same substrate and that a reflective element is incorporated onto the same substrate" [answer, page 9]. The Cheung reference in

combination with the Gaudino and Thompson references fails to cure the deficiencies of Gaudino and Thompson noted above with respect to claims 1-15, 18-22, 25-32, 35-59, 62-68, and 71-89. Therefore, we will not sustain the Examiner's rejection under 35 U.S.C. § 103 for the same reasons as set forth above.

Conclusion

In view of the foregoing discussion, we have not sustained the rejection under 35 U.S.C. § 103 of claims 1-89.

Joseph V. Higgins

Joseph L. Coughlin

Robert B. Smith

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

Appeal No. 2005-2114
Application No. 09/248,103

Page 9

STAAS & HALSEY, L.L.P.
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005